



IT CORPORATION

April 19, 1985

Project No. 846803

Mr. John Bonsett  
Johnson County Health Department  
86 West Court Street  
Court House Annex  
Franklin, IN 46131

EPA Region 5 Records Ctr.



287293

Phase II Site Assessment  
Amphenol Products Facility  
Franklin, Indiana

Dear Mr. Bonsett:

This letter presents IT Corporation's (IT) planned activities for the second phase of site investigations at the former Amphenol Products Division (Amphenol) facility in Franklin, Indiana. These proposed tasks are based upon the findings of our initial site investigations, which are summarized in this letter. Our next phase of site investigations includes the installation of off-site monitoring wells and removal and the proper abandonment of three deep monitoring wells located in the southern portion of the plant property.

SUMMARY OF FINDINGS TO DATE

The primary objectives of the first phase of site investigations were the following:

- Develop, sample, and assess the condition of the 17 existing ground water monitoring wells
- Sample the storm sewer and Hurricane Creek to determine if they are impacted by site-derived contaminants
- Confirm ground water elevations and direction of flow
- Evaluate potential contaminant sources, with particular attention given to the plating operations facility.

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The findings of these investigations can be summarized as follows:

- The existing site monitoring wells were constructed without benefit of a properly placed filter pack around the well screen or an adequate bentonite seal. Potentially contaminated near-surface soils were allowed to cave in around the well casing. Deep wells on site are potentially allowing vertical migration of contaminants to occur. Additionally, the screened intervals of most of the shallow monitoring wells are improperly located.
- Very few ground water samples contained any metals at concentrations in excess of drinking water standards. Organic contaminants were found in ground water throughout the site, with the highest concentrations found in the southern portion of the plant property. *See AEC*
- Organic contaminants are entering the storm sewer network, leaving the site, and impacting the water quality of Hurricane Creek.
- The plating building does not appear to be a continuing source of contaminants. Organic contaminants are present in the ground beneath the site. The most probable historic source of these contaminants is leakage from the old terra cotta sanitary sewer line.

Based on the initial evaluation, the next phase of the site investigations should be designed to meet the following objectives:

- Determine if the storm sewer and/or pipe bed is acting as an interceptor to off-site ground water contaminant migration
- Properly abandon the three deep monitoring wells in the southeastern portion of the site in order to prevent further downward migration of contaminants
- Investigate the type, extent, and concentration of organic contaminants present in the shallow soils near the southwestern corner of the plating building and determine whether they are contributing significantly to ground water contamination.

## PHASE II INVESTIGATIONS

Off-Site Monitoring Wells

The recently completed analyses of ground water samples obtained from the existing on-site monitoring wells revealed several organic contaminants are present in site ground water and are concentrated in the area south of the former plating facility. This area of contamination extends into the southeastern portion of the plant property at least as far as the existing 72-inch storm sewer which traverses the site near the southern property boundary. Due to the size of the storm sewer and the depth at which the base of its trench was excavated (believed to be 20 feet), it is believed that the trench and storm sewer may be acting as a ground water intercept and, as such, preventing any significant off-site contaminant migration. This is further suggested by the fact that the storm sewer lies perpendicular to the direction of ground water flow and also by the fact that organic contaminants increase in concentration within the storm sewer as it passes through the southeastern portion of the site. In order to determine the storm sewer's effectiveness in intercepting off-site contaminant migration, IT will install three off-site monitoring wells located downgradient of the storm sewer. Proposed locations are shown in the enclosed Figure 1. Although a small amount of available land owned by Allied exists between the storm sewer and the property boundary, it is possible some organics may have been transported to this area by seasonal high water table conditions. The proposed off-site locations are situated to provide an indication of the direction of migration of any contaminants which are not intercepted by the storm sewer as well as to avoid any contamination which has migrated via a high water table.

The off-site wells will be installed at the base of the near-surface sand layer, at a depth of approximately 20 feet. Soil samples will be collected at five-foot intervals for preparation of a boring log based on visual descriptions of the materials encountered. The wells will be constructed of two-inch-inside-diameter threaded polyvinyl chloride (PVC) and a ten-foot section of factory-slotted well screen will be placed in the sand layer in order that the well sensing zone will be in contact with any fluctuations of the ground water table. The screen will be sand packed with appropriately sized granular materials which will extend several feet above the top of the well screen. A bentonite seal will then be placed on top of the granular filter pack, and the remainder of the boring annulus will be grouted to ground water surface with a cement-bentonite grout mixture. The off-site wells will be constructed flush with ground surface and encased at surface in a standard gate box. The wells will be properly developed either by pumping or air-lifting and sampled. These ground water samples will be transported on ice to IT's laboratory for analysis for volatile organic compounds.

On-Site Monitoring Wells

IT will also to install a new well cluster on site in the southeastern portion of the site as shown in Figure 1. The cluster would consist of one monitoring well placed in the near-surface sand layer, similar to the proposed off-site wells, and a second well screened in the next-deepest sand layer. Soil samples will be collected only from the deeper well installation boring only for the preparation of a boring log. According to the logs for the existing on-site wells, the second sand layer is expected to lie between 50 and 60 feet below ground surface. IT feels these wells are necessary to confirm and better quantify the contamination detected in the existing wells. Such confirmation is necessary because of the apparent deficiencies in the well construction techniques utilized in installation of the existing on-site wells. A properly installed well in the near-surface sand layer will permit representative samples to be obtained to better quantify ground water contamination. A well in the deeper sand layer, when properly constructed, will permit us to determine if deep contamination has occurred via any interconnection between the sand layers. This well will be located to minimize detection of contaminants which may have migrated from the near-surface sand to the deeper sand layer through the hydraulic connection provided by the improperly sealed monitoring wells which penetrate both sand layers.

Abandonment of Existing Deep Wells

Three existing monitoring wells currently found in the southeastern portion of the site penetrate two or more sand layers. Boring logs and well construction details for these wells indicate the wells have not been properly sealed into the individual sand layers in which each well terminates. This condition presents the potential for vertical migration of contaminants to occur along the length of the boring due to the lack of a proper seal. In order to prevent future vertical contamination, these three wells (MW-13, MW-14, and MW-15) will be removed and their borings sealed.

IT proposes to overdrill each of the three wells, opening a new boring equal to or slightly greater than the diameter of the original boring. The entire length of the wells will be overdrilled and the PVC well materials removed. Each boring will then be grouted to ground surface with an expansive grout mixture.

Additional Off-Site Well

Discussions are continuing with Mr. James Morris of the Indiana Cities Water Corporation concerning the installation of a large diameter monitoring well east of the Allied site, near the municipal well field. This well would be used to detect any organics which may be migrating

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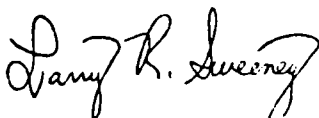
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toward the well field. The details of this additional well will be worked out upon my arrival at the site.

We hope this information is satisfactory for your needs at this time. Please contact me if I can be of further assistance in clarifying these proposed investigations. I will be on site for approximately 7 to 10 days beginning Monday, April 22, 1985.

Sincerely yours,

A handwritten signature in cursive script, reading "Larry R. Sweeney". The signature is written in dark ink and is positioned above the typed name.

Larry R. Sweeney  
Project Manager

LRS:rsg

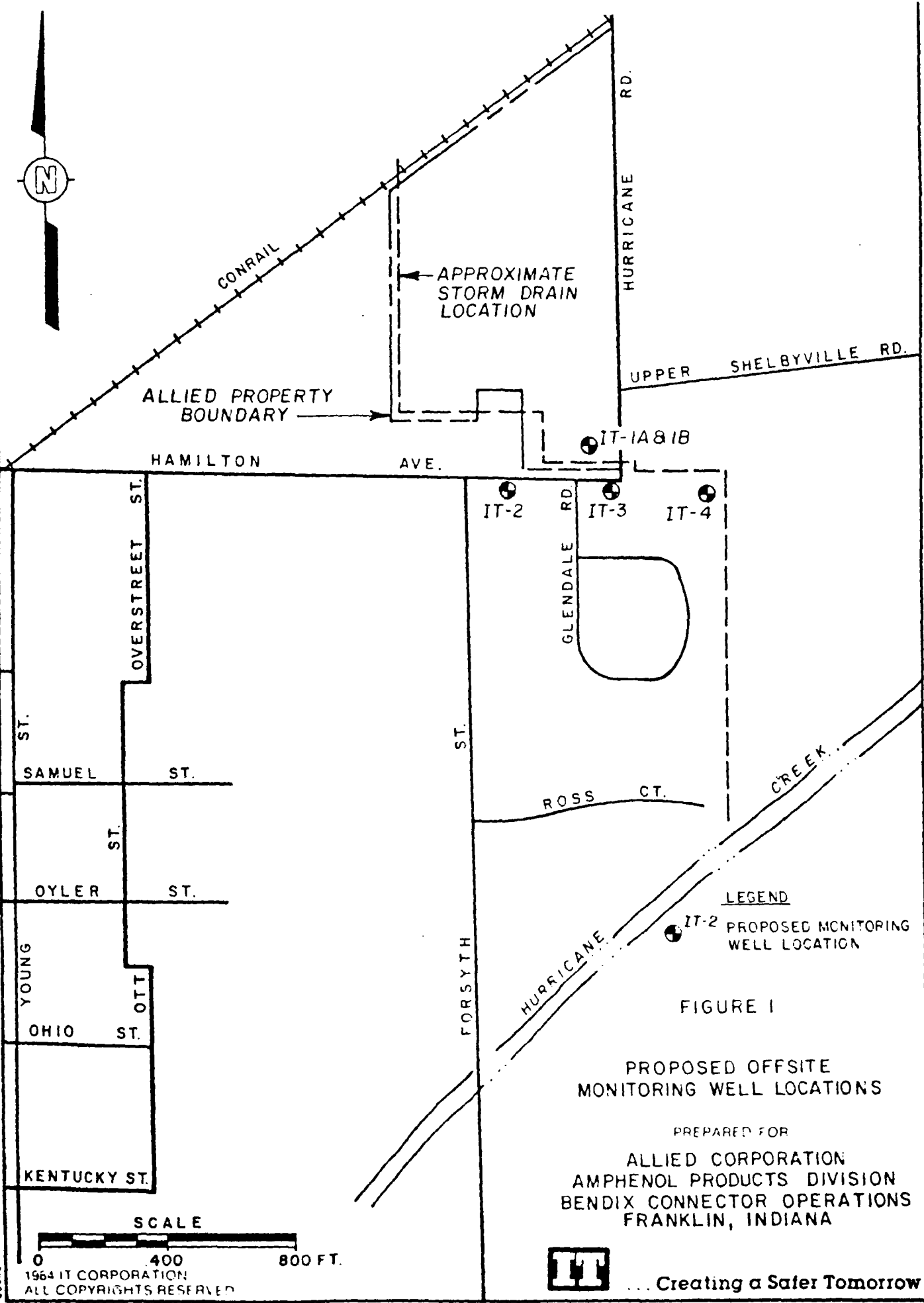
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LEGEND

IT-2 PROPOSED MONITORING WELL LOCATION

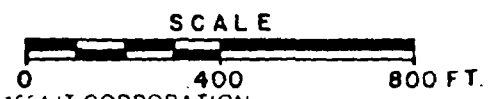
FIGURE 1

PROPOSED OFFSITE MONITORING WELL LOCATIONS

PREPARED FOR  
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 AMPHENOL PRODUCTS DIVISION  
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 FRANKLIN, INDIANA



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